Improving Robot Learning from Feedback and Demonstration using Natural Language
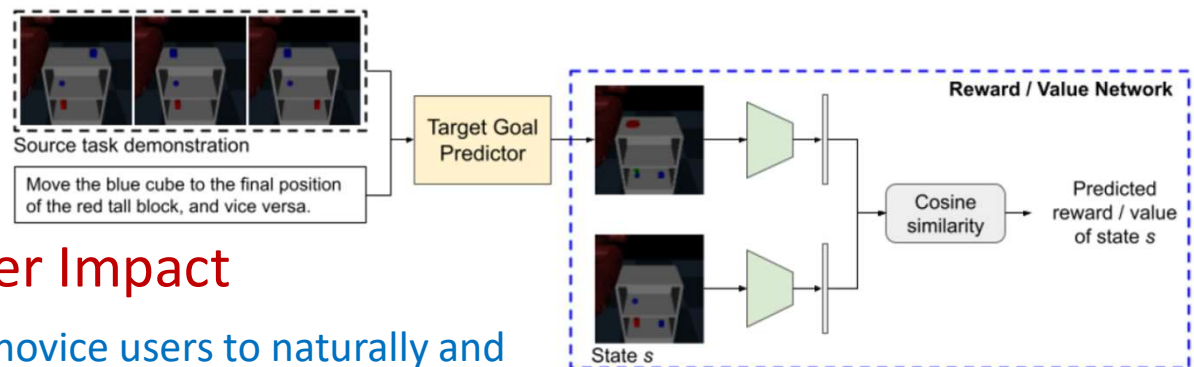
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Challenge

- Use natural language narration to aid robot learning from feedback and demonstration.

Solution

- Zero-shot Task Adaptation using Natural Language: Given a demonstration of one task, solve a related task using only a natural language description of the difference.

Broader Impact

- Allow novice users to naturally and effectively train robots to perform novel tasks.

- Improve education for grad, ugrad (FRI), and HS (First Bytes) students.

- Measure improved learning rate from using natural language narration.

Scientific Impact

- Novel methods for using natural language to improve task learning from limited training data.